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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/556,666

11/10/2005

Son-Ha Giang

Serie 6288

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40582

7590

07/23/2008

AIR LIQUIDE

Intellectual Property

2700 POST OAK BOULEVARD, SUITE 1800

HOUSTON, TX 77056

EXAMINER

SAVANI, AVINASH A

ART UNIT

PAPER NUMBER

3749

MAIL DATE

DELIVERY MODE

07/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,666	Applicant(s) GIANG ET AL.	
	Examiner AVINASH SAVANI	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-33 is/are pending in the application.
- 4a) Of the above claim(s) 17-27,32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/10/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. This action is in response to the election by the application dated on 6/13/2008 that was in response to the examiner's Restriction Requirement on May 16, 2008. Claims 17-27, 32 and 33, directed toward invention I, are withdrawn without traverse, and claims 28-31, directed toward invention II, are elected without traverse.

Drawings

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the representation of the burner must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. It is understood that the applicant relies on the invention disclosed in the prior art references, in particular to U.S. Patent # 5500030, however, the applicant's representation of the invention must be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Iatrides et al [5743723].

5. With respect to claim 28, Iatrides et al discloses: An apparatus which may be used as a combustion system [see FIG 3] said apparatus comprising: a) an oxyfuel burner (10); b) a means for feeding said burner with fuel (14); c) a means for feeding said burner with an oxidizer (12); d) an oxygen feed means (16); e) an additional gas

feed means, wherein said oxidizer feed means cooperates with said oxygen feed means and said additional gas feed means [col 5, line 63-67, col 6, line 1-6]; f) a means for measuring a flow rate [see FIG 3, col 4, line 40-45], wherein said flow rate comprises at least one member selected from the group consisting of: 1) said oxygen's flow rate; and 2) said fuel's flow rate; and g) a means for controlling said additional gas's flow rate (35).

6. With respect to claim 29, the claim is interpreted as the flow rate of the additional gas is adjusted according to the flow rate of the oxygen or fuel flow rate, and is increased or decreased accordingly. Therefore, latrides discloses: The apparatus of claim 28, wherein said means for controlling said additional gas's flow rate is slaved to said means for measuring a flow rate [col 4, line 28-37].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over latrides ['723], further in view of Kurata [6004128].

9. With respect to claim 30, latrides discloses the apparatus of claim 28, wherein there is a means for controlling said additional gas's flow, but it is not disclosed that the flow rate is controlled by a pressure regulator. Kurata teaches a similar combustion system using a regulator (36) to control the additional gas flow rate which also in turn

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regulates the pressure, which is what the pressure regulator is understood to do [col 4, line 33-52]. In view of Kurata, there is a pressure regulator controlling the flow rate of the additional gas. It would have been obvious to a person of ordinary skill in the art to control the additional gas flow rate with a pressure regulator because one of ordinary skill recognized that the pressure of the incoming gas would need to be regulated in order to have a flame of the ideal temperature, since it is also known that pressure and temperature are directly related. The result of regulating the pressure is predictable in that the temperature after complete combustion of the products will be in range to produce a suitable flame.

10. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iatrides ['723], further in view of Versluis [5630408].

11. With respect to claim 31, Iatrides discloses the apparatus of claim 28, wherein there is a means for controlling said additional gas's flow, but it is not disclosed that the flow rate is controlled by a servovalve. Iatrides, however, discloses that any control system can be used to control the flow rate of the additional gas [col 4, line 40-44], therefore it is believed that one of ordinary skill in the art would recognize the different options of controlling the additional gas flow rate to regulate the pressure. Thus, Versluis teaches a similar device wherein the additional gas flow rate is controlled by a servo valve [col 47-54]. In view of Versluis, a servovalve is used to monitor pressure at a burner end. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have the additional gas flow rate controlled by a servovalve because it was recognized that burner pressure must be controlled.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to AVINASH SAVANI whose telephone number is (571)270-3762. The examiner can normally be reached on Monday- Friday, alternate Fridays off, 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister can be reached on 571-272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Avinash Savani/
Examiner, Art Unit 3749

/Steven B. McAllister/
Supervisory Patent Examiner, Art Unit 3749

/A. S./
7/9/2008